AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A method of manufacturing a synthesis gas containing hydrogen and carbon monoxide, which comprises steps of;

providing a hydrogen sulfide-removing device comprising:

(a) at least three units of first desulfurizing columns to be filled with triiron tetraoxide, wherein a first placed desulfurizing column among the first desulfurizing columns is designed to execute an adsorption operation of hydrogen sulfide, a second placed desulfurizing column among the first desulfurizing columns is designed to execute an operation of regenerating the adsorbent (iron sulfide) on which hydrogen sulfide is adsorbed and a third placed desulfurizing colum among the first desulfurizing columns is designed to execute an operation of reducing the adsorbent that has been regenerated, these operations being sequentially executed, and

(b) a second desulfurizing column filled with the hydrogen sulfide adsorbent comprising zinc oxide:

removing only hydrogen sulfide from a natural gas containing hydrogen sulfide and carbon dioxide by permitting the natural gas to pass through [a hydrogen sulfide-removing device filled with a hydrogen sulfide adsorbent;] one column selected from these first desulfurizing columns and the second desulfurizing column of the hydrogen sulfide-removing device;

adding carbon dioxide and steam to the natural gas from which the hydrogen sulfide has been removed to prepare a mixed gas; and

feeding the mixed gas into a reaction tube of a reformer, thereby permitting mainly a steam reforming reaction to take place in the mixed gas,

wherein the molar ratio between methane (CH_4) in the natural gas and carbon dioxide (CO_2) falls within the range of CH_4:CO_2 = 1 : 1 to 1 : 3 on the occasion of adding steam and carbon dioxide to the natural gas.

Claim 2 (Original) The method of manufacturing a synthesis gas according to claim 1, wherein before the natural gas is fed to the hydrogen sulfide-removing device, the natural gas is

forced to pass through a convection portion communicated with a combustion radiation portion of the reformer, thereby heating said natural gas up to a temperature which is suited for the reaction between the hydrogen sulfide in the natural gas and the hydrogen sulfide adsorbent.

Claim 3 (Original) The method of manufacturing a synthesis gas according to claim 1, wherein the carbon dioxide recovered from a combustion exhaust gas generated at a combustion radiation portion of the reformer is utilized as a carbon dioxide source.

Claim 4 (Original) The method of manufacturing a synthesis gas according to claim 1, wherein the carbon dioxide recovered from the synthesis gas at a downstream side of the reformer is utilized as a carbon dioxide source.

Claims 5-7 (Cancelled)